

Notice of Allowability

Application No.

10/038,772

Examiner

Jennifer M. Dolan

Applicant(s)

KIM, KEUM-NAM

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE 4/6/05.
2. ☒ The allowed claim(s) is/are 7-9 and 11-24.
3. ☒ The drawings filed on 08 January 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>8/30/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/23/05 has been entered.

Allowable Subject Matter

2. Claims 7-9 and 11-24 are allowed.

3. The following is an examiner's statement of reasons for allowance:

Regarding claims 7 and 23, the primary reason for allowance is the requirement that in an electroluminescent flat panel display device, the pixel electrode is formed prior to the TFT and is covered by an insulating layer during the formation of the TFT.

The prior art for electroluminescent displays generally teaches that the pixel electrode is formed after the formation of the TFT structure and is disposed overlying the TFT structure. There is no suggestion for providing the pixel electrode of an electroluminescent device on the substrate at a level below the gate electrode of the TFT (claim 7) or forming the pixel electrode before forming the TFT device (claim 23).

Although it is known in the art of flat panel liquid crystal display devices to form the pixel electrode directly on the substrate, such that it is disposed at the same level as either the

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gate or active regions (see US 5,686,326 to Kitahara et al., US 6,087,730 to McGarvey et al. or US 5,671,027 to Sasano et al.), these LCD devices use a liquid crystal material, rather than an electroluminescent material, disposed on the pixel electrode. Liquid crystal layers and electroluminescent layers have fundamentally different requirements for the driving current, and hence have different optimized structures for the pixel electrode. Furthermore, liquid crystal displays, which use an external back-light source, rather than using the internal light emissive layer of electroluminescent devices, will require a different ordering of layers for maximum light extraction from the display panel. Thus, it is the Examiner's opinion that the methods for forming the pixel electrode of an LCD device listed above cannot properly be combined with methods for making an electroluminescent device in order to arrive at the claimed subject matter.

Since there is no direct suggestion of the feasibility or any motivations for providing the pixel electrode for an electroluminescent device in the manner claimed, and since the claimed method provides the unexpected advantages of improving light transmittance/extraction from the device as well as protecting the source and drain electrodes from damages incurred while patterning the pixel electrode, it is the Examiner's opinion that the invention of claims 7 and 23 would not have been obvious to a person having ordinary skill in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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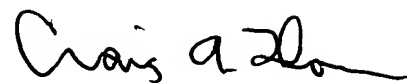
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer M. Dolan whose telephone number is (571) 272-1690. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer M. Dolan
Examiner
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jmd



**CRAIG A. THOMPSON
PRIMARY EXAMINER**